Note 9. Being the first year of commercial operation of Kakrapar-1, initial regulatory power limit of 75 per cent and outage for turbine inspection and modification passed on lessons learnt from the Narora fire incident led to shortfall.

Air borne survey for atomic minerals

1334. SHRI PRAMOD MAHAJAN: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that Airborne Survey for atomic minerals has been hit for want of aircraft; and

(b) if so, what are the facts thereof alongwith the corrective steps taken by Government?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHUVNESH CHATURVEDI): (a) Yes, Sir.

(b) The airborne surveys could not be taken up for the period January 1993 to March 1993 due to non-availability of Aircraft from flying agency. However, the surveys were taken up from November 1993 to March 1994, the best flying season available for such surveys in the country. To ensure the availability of aircraft for surveys during the flying season, it has been decided to enter into a contract on a long term basis with the flying agencies.

Power generation by automatic power plants

1335. SHRI S. AUSTIN: Will the PRIME MINISTER be pleased to state:

(a) the details of the total quantum of power generated by each Atomic Power Plant in the country during each of the last three years, year-wise;

(b) whether it is a fact that the generation of power is speadily declining;

(c) if so, the reasons therefor;

(d) the steps being taken by Government to increase the capacity of power generation;

(e) the reasons for frequent closure of Rajasthan Atomic Power Station (RAPS); and

(f) the present power generating capacity of each unit of Rajasthan Atomic Power Station and what are the details of amount earmarked for its expansion?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHUVNESH CHATURVEDI): (a) The electricity generated expressed in Million Kilowatt hours (MUs) by the Atomic Power Stations in commercial operation during last three years is given below:

	In MUs		
	1991-92	1992-93	1993-94
Tarapur 1 & 2	1711	1935	1823
Rajasthan 1 & 2	1186	1058	1260
Madras 1 & 2	2160	1978	1388
*Narora 1 & 2	532	1680	335
**Kakrapar—1	..	..	621
	5589	6651	5427

*Narora—1 commenced commercial operation w.e.f. 1st January 1991 and Narora—2 w.e.f. 1st July, 1992.

**Kakrapar—1 commenced commercial operation w.e.f. 6th May, 1993.

In addition to the Commercial generation, the pre-commercial generation from Narora 2 was about 35 MUs during 1991-92 and 89 MUs during 1992-93. The pre-commercial generation from Kakrapar-1 was about 35 MUs during 1993-94.

(b) and (c) The decline in total generation in 1993-94 is mainly due to the Narora fire incident and the series of inservice inspections of indigenous turbines of Nuclear Power Stations as a consequence thereof and being the first year of commercial operation of Kakrapar-1.

(d) To increase the capacity of power generation efforts are on to improve the capacity utilisation and to expedite construction of ongoing projects to avoid time overruns. Setting up of future projects will be consistent with availabiilty of funds.

(e) Rajasthan-2 has in general operated well and it has achieved a life time average capacity utilisation of around 60 per cent from 1.4.81 till 31.3.94. In regard to Rajasthan-1, the first Pressurised Heavy Water Reactor unit (PHWR), while a minor but difficult heavy water leak from the Over Pressure Relief Device (OPRD) mounted on the calandria mainly contributed to the reduced availability in the recent years, earlier the reason was a light water leak in the south end-shield and the consequent efforts in developing and implementing a repair procedure.

(f) The present rated power generation capacity of the units of Rajasthan Atomic Power Station in operation are 100 MWe and 200 MWe in respect of unit-1 and unit-2 respectively. Presently two additional units each of 220 MWe capacity i.e. Rajasthan 3&4 (2X220 MWe) are under construction. The approved outlay for this project during the 8th five year plan (1992—97) is Rs. 1000 Crore.

Damage to Kaiga Nuclear Power Plant

1336. SHRI JOHN. F. FERNANDES: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that Nuclear Power Plant which is under construction at Kaiga, Karwar barely 30 Km. from Goa, suffered damage in collapse of its dome which is under construction;

(b) whether the contractor, entrusted with the construction work, have capability to build such projects on international standards; and

(c) what safety measures are being taken to see that the construction is not sub-standard so as to avoid major nuclear disaster after the commissioning of the project?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHUVNESH CHATURVEDI): (a) A portion of concrete from the under surface of the inner containment dome of Unit-1 of the Kaiga Atomic Power Project got detached and fell down during pre-stressing operations.

(b) Yes, Sir. The civil construction work for the reactor building was entrusted to a well known and reputed contractor who had earlier done construction work for the Madras Atomic Power Station. The construction work at Kaiga is being carried out to stipulated and relevant standards.

(c) The entire containment structure is througly tested, inspected and checked before criticality of reactor is authorised. Therefore the question of a failure of the dome after commissioning of the project does not arise. As part of the Technical Specifications, it is also mandatory to carry out tests to ensure integrity of the containment at specified intervals during operation. Operation of nuclear power plants is governed by a set of Technical Specifications and is